IRSTI 06.71.07 UDC 631

Research Article

DOI: 10.46666/2024-2.2708-9991.20 https://www.jpra-kazniiapk.kz

#### CERTIFICATION ISSUES IN TRAINING ECONOMIC PERSONNEL FOR AIC

# АӨК ҮШІН ЭКОНОМИКАЛЫҚ БЕЙІНДЕГІ КАДРЛАРДЫ ДАЯРЛАУ КЕЗІНДЕГІ СЕРТИФИКАТТАУ МӘСЕЛЕЛЕРІ

# ВОПРОСЫ СЕРТИФИКАЦИИ ПРИ ПОДГОТОВКЕ КАДРОВ ЭКОНОМИЧЕСКОГО ПРОФИЛЯ ДЛЯ АПК

D.N. SHAIKIN\*
C.E.S., Professor
M.M. VALIEVA
C.E.S., Associate Professor
O.V. KOPYLOVA

M. Kozybayev North Kazakhstan University, Petropavlovsk, Kazakhstan \*corresponding author email: shaikindimash@mail.ru

C.E.S.

Д.Н. ШАЙКИН\* э.ғ.к., профессор М.М. ВАЛИЕВА

э.ғ.к., қауымдастырылған профессор

О.В. КОПЫЛОВА

К.Э.Н.

М. Қозыбаев атындағы Солтүстік Қазақстан университеті, Петропавл, Қазақстан \*автордың электрондық поштасы: shaikindimash @mail.ru

Д.Н. ШАЙКИН\*
к.э.н., профессор
М.М. ВАЛИЕВА
к.э.н., ассоциированный профессор
О.В. КОПЫЛОВА

к.э.н.

Северо-Казахстанский университет им. М. Козыбаева, Петропавловск, Казахстан \*электронная почта автора: shaikindimash@mail.ru

Annotation. The goal is to analyze literary sources interpreting the term "certification" and develop recommendations aimed at professional growth and career of graduates of agricultural universities. Methods - comparisons, generalizations. Results - the essence of the concept of "certification" is revealed. The role of this process for students of Kazakh universities is shown in view of development of agricultural economy in the republic, taking into account such principles as economic orientation, internationalization, transformation and autonomy in modern conditions, characterized by the formation of competitive environment focused on meeting the needs of labor market. The main requirements and trends related to organization of certification in this industry, set out in the relevant government documents (concepts, regulations, etc.), are presented. The example of M. Kozybaev North Kazakhstan University, in which Certification Training Center has been opened to train students in 1C software products, with further expansion of employment opportunities and promotion prospects for graduates of economic educational programs based on application of digital competencies in the field of accounting (accounting in agricultural enterprise). Mastering these disciplines will provide solid knowledge and allow students to successfully pass the qualifying exam and subsequently receive the "1C: PROFESSIONAL" certificate. Statistics on the work of the Center, the number of trained students who received certificates and jobs at enterprises in agricultural sector are presented. The authors note that certification is one of the most important areas of activity of any university, which helps a young specialist to be effective and successful in agricultural market for job vacancies. Conclusions - gaining of knowledge on the basis of non-formal education will contribute to the effective implementation of the 3L concept in employment in various sectors of economy and provision of competitive personnel.

238

Аңдатпа. *Мақсаты –* «сертификаттау» терминін түсіндіретін әдеби дереккөздерді талдау, аграрлық ЖОО түлектерінің кәсіби өсуі мен мансабына бағытталған ұсыныстарды әзірлеу. Әдістері - салыстыру, салыстыру, жалпылау. Нәтижелері – «сертификаттау» ұғымының мәні ашылады. Бұл үдерістің Қазақстан университеттерінің студенттері үшін республикадағы аграрлық экономиканы дамыту муддесінде еңбек нарығының қажеттіліктерін қанағаттандыруға бағдарланған бәсекелестік ортаны қалыптастырумен сипатталатын қазіргі жағдайдағы экономикалық бағыттылық, интернационалдандыру, трансформация және автономия сияқты қағидаттарды ескеретін рөлі көрсетілген. Тиісті мемлекеттік құжаттарда (тұжырымдамалар, ережелер және т.б.) белгіленген осы саладағы сертификаттауды ұйымдастыруға байланысты негізгі талаптары мен үрдістері берілген. М.Қозыбаев атындағы Солтүстік Қазақстан университетінің мысалы қарастырылған, онда студенттерді 1С бағдарламалық өнімдеріне оқыту үшін Сертификаттау оқу орталығы ашылған, бухгалтерлік есеп (ауылшаруашылық кәсіпорындарында бухгалтерлік есептілікті жүргізу) саласындағы цифрлық құзыреттіліктерді қолдану негізінде экономикалық білім беру бағдарламалары тулектерінің жұмысқа орналасу мүмкіндіктері мен жоғарылау перспективалары одан әрі кеңейтіледі. Бұл пәндерді игеру берік білімді қамтамасыз етеді және студенттерге біліктілік емтиханын сәтті тапсыруға, содан кейін «1С: Кәсіби маман» сертификатын алуға мүмкіндік береді. Орталықтың жұмыс статистикасы, аграрлық сектор кәсіпорындарында сертификаттар мен жұмыс орындарын алған оқытылған студенттер саны ұсынылған. Авторлар сертификаттау кез-келген университеттің маңызды бағыттарының бірі болып табылады, бұл жас маманға жұмыс орындарының аграрлық нарығында тиімді және табысты болуға көмектеседі. Қорытындылар - бейресми білім негізінде алынған білімді игеру экономиканың түрлі салаларында жұмысқа орналасу кезінде 3L тұжырымдамасын тиімді іске асыруға, бәсекеге қабілетті кадрлармен қамтамасыз етуге ықпал етеді.

\*

Аннотация. *Цель* – анализ литературных источников, трактующих термин «сертификация», разработка рекомендаций, направленных на профессиональный рост и карьеру выпускников аграрных вузов. *Методы* – сравнения, сопоставления, обобщения. *Результаты* – раскрывается сущность понятия «сертификация». Показана роль этого процесса для студентов казахстанских университетов в интересах развития аграрной экономики в республике, учитывающего такие принципы, как экономическая направленность, интернационализация, трансформация и автономия в современных условиях, характеризующихся формированием конкурентной среды, ориентированной на удовлетворение потребностей рынка труда. Приведены основные требования и тенденции, связанные с организацией сертификации в данной отрасли, изложенные в соответствующих государственных документах (концепциях, постановлениях и т.д.). Рассмотрен пример Северо-Казахстанского университета им. М. Козыбаева, в котором открыт Сертификационный учебный центр для обучения студентов программным продуктам 1С, с дальнейшим расширением возможностей трудоустройства и перспективы продвижения для выпускников экономических образовательных программ, основанных на применении цифровых компетенций в области бухгалтерского учета (ведение бухгалтерской отчетности в сельскохозяйственном предприятии). Освоение этих дисциплин обеспечит прочные знания и позволит студентам успешно сдать квалификационный экзамен с последующим получением сертификата «1С: ПРОФЕССИОНАЛ». Представлена статистика работы Центра, количестве обученных студентов, получивших сертификаты и рабочие места на предприятиях аграрного сектора. Авторы отмечают, что сертификация является одним из важнейших направлений деятельности любого вуза, которая помогает молодому специалисту быть эффективным и успешным на аграрном рынке вакансий рабочих мест. Выводы – приобретение полученных знаний на основе неформального образования будет способствовать эффективной реализации концепции 3L при трудоустройстве в различных сферах экономики, обеспечению конкурентоспособными кадрами.

Key words: agricultural labor market, certification, accounting, economic educational programs, competencies, quality of knowledge, employment, career growth.

Түйінді сөздер: аграрлық еңбек нарығы, сертификаттау, бухгалтерлік есеп, экономикалық білім беру бағдарламалары, құзыреттер, білім сапасы, жұмысқа орналасу, мансаптық өсу.

Ключевые слова: аграрный рынок труда, сертификация, бухгалтерский учет, экономические образовательные программы, компетенции, качество знаний, трудоустройство, карьерный рост.

Received: 12.04.2024. Approved after Peer-reviewed: 20.05.2024. Accepted: 10.06.2024.

#### Introduction

Development of autonomy educational environment in the Kazakhstan universities provides independent approach under working out the curriculums and teaching plans. This aspect also provides inclusion the subjects that expand such both issues as the professional competencies of students and obtaining the additional and supplementary skills.

Within this aspect, certification of students is an important aspect in getting the high-qualitative educational services. The quality of rendering the educational services is the most important indicator in the activity of any university. It is generally substantiated, that quality is the certainty of an object that distinguishes it from other objects that exists in nature.

On the one hand, products quality improvement determines the ability of an enterprise to survive in the modern competitive market conditions. On the other hand, it is aimed at ensuring scientific and technological progress of any country, increasing production efficiency, as well as saving all types of resources that are used in various producing processes. At the same time, standardization and certification are used to be the universal methods that ensure the growth of quality.

The goal of this article is to analyze the literature sources that consider «certification» and to develop recommendations that ensure more effective certifying approaches being one of the main driving forces of professional development and career growth of any alumni in the agrarian labor market.

To achieve this goal, the following tasks have been solved in the article:

- the modern terminology and relevant apparatus have been considered and supplemented; it provides understanding the essence of «certification» primarily in terms of the scientific positions and opinions of authors who published the outcomes of their research in high-ranking journals that are indexed in Web of Science / Clarivate Analytics;
- the existing approaches to the analysis of the certification process in the modern Kazakhstan university are presented; this process for opening 1C Certification Center in the North Kazakhstan University named after M. Kozybayev consisted of 3 stages;
- the relationship between the agrarian employer and the student is shown in terms of the graduate's professional knowledge that is confirmed by certificate;
- the importance of opening certification centers in Kazakhstan universities in modern conditions is presented;

- the possibilities of non-formal education (for example, through certification training centers) are presented. This process provides implementation of the 3L principles (Long Life Learning) more effectively.

\*\*\*\*\*\*\*\*

The authors put forward a hypothesis that lead to the achieving this goal: development and further improvement of the certification system of students is aimed at ensuring a competitive environment in the agrarian labor market and alumni's career growth.

#### Literature review

In modern scientific literature «certifycation» generally concerns testing of an object for compliance with state standards and requirements. For example, agricultural certification can provide an avenue to enhance the value of farm produce and eliminate market impediments (Wenqi Duan, Mingming Jiang, Jianhong Qi) [1].

Taking into consideration that Latin translation of «certification», that is «it is done, it is correct», some authors conclude that despite the increase of global area under certification and mounting evidence of positive socioeconomic outcomes, certification-derived conservation benefits are less clear (Francisco d'Albertas, Patricia Ruggiero, Luis Fernando et.al) [2].

Historically, the term «certification» has been considered as a special procedure and used for a long time, whereas the term «certificate» has been known since the XIX century (Zemljanoj K.G., Glyzina A.Je.) [3].

In turn, «certification» may also be considered as an official confirmation of compliance with technical regulations, standards and determines the competitiveness of products and services. On the other hand, certifications are procedures that provide written assurance that a given product complies with specific standards (Borrello M., Cecchini L., Vecchio R et.al.) [4].

Several researchers underline that many countries with big experience in organic certification of agricultural lands have the extensive ecologically clean pasturing areas and also they have achieved high outcomes in marketing and consumption of organic products (Bastaubaeva Sh.O, Grigoruk V.V, Sljamova N.D.) [5]. On the other hand, certification schemes have been instituted as a means to limit biodiversity loss caused by the production of some of these commodities (Hideyuki Kubo, Arief Darmawan, Hendarto André et al.) [6]. Moreover, in some cases, certification is the governmentally regulated procedure (Solhee Kim, Kyo Suh) [7].

One of the issues is also the study of existing barriers in trade relations between Central Asian countries in terms of certifycation and veterinary control, customs, logistics and finance. They include current state of import and export transactions with certain types of dairy products (Ajsautov D.M) [8].

Discussing about export of agricultural products, trends and targets, the authors substantiate the need in regulation of the goods certification based on the development of own quality control infrastructure that corresponds to the international standards (Ibyzhanova A.D., Rustenova Je.A., Dzha-kupova A.K.) [9].

A number of foreign authors mention about need of certification within the relevant state programs that will ensure the adherence to the best practices, contribute to the preservation of the environment and favorable socio-economic conditions, and also offer producers the growth of prices and effective logistical access to the world markets (Siaw D., Sarpong D., Botchie D. et al.) [10].

Certification process has become more relevant in the post-Covid period. For example, today in the UK, some certification schemes include confirmation of vaccination status, current infectivity and current immunity (Mills F., Carter H., Benny L. et al.) [11].

Finally, an important aspect in the implementation of certification is further statistical modeling and econometric forecasting that will improve mechanisms aimed at the provision of the enterprise sustainable development in modern competitive market conditions (Zheng Y., Gracia A., Hu L.) [12].

#### Materials and methods

The Conception of Development of Higher Education and Science in the Republic of Kazakhstan for 2023-2029, approved by the Statement of the Government of the Republic of Kazakhstan, places special emphasis on Long Life Learning (3L). Its main global trends are in the integration of formal and informal education based on their outcomes recognition in order to provide opportunities for people to accumulate academic credits. Key point here is new technologies. Its use and dissemination should increase the requirements for technical skills. In addition, it will significantly expand the opportunities for successful integration of labor resources into the modern labor market (The concept of development of higher education and science...) [13].

Likewise, an important imperative here is the development and implementation in providing free access to students of Kazakhstan universities to on-line courses that are located at such a world-famous and acknowledged educational platform as COURSERA (Official website of the on-line platform COURSERA) [14].

Kazakhstan students of various educational programs have opportunities to take these on-line courses for free and receive certificates from highly ranked foreign universities. In turn, Minister of Science and Higher Education of the Republic of Kazakhstan has noted the need for internationalization of higher education as the development of «academic cooperation with leading foreign universities which is an effective tool for the modernization of regional universities and improving the competetiveness of graduates» (Nurbek S. The Ministry of Education and Science of the Republic of Kazakhstan attaches paramount importance to modernization...) [15].

## Results

One of the examples of cooperation of the university with international organizations is the opening of the Certification Training Center in the North Kazakhstan University named after Manash Kozybayev. Its main goal is the certification of students in «Accounting and Audit» and «Economics». Graduates of these educational programs with digital competencies in the field of accounting are in demand both in regional and international labor markets.

Any Kazakhstan university has the opportunity to open a Certification Training Center if the following conditions are met. The opening of the Certification Training Center at the North Kazakhstan University named after Manash Kozybayev was carried out on the basis of the consistent implementation of 3 stages. This included the conclusion of the following 3 contracts with the 1C company:

- \* purchase and installation of discounted software for universities;
- \* preparation of teachers (students) to take the test to obtain the certificate "1C: Professional". After receiving these certifica-tes, teachers must pass a certification exam for compliance of the qualification level with the requirements imposed by 1C when organizing the educational process at the Certified Training Center. This implies obtaining a certificate "Teacher of the Certification Training Center. 1C: Enterprise 8. Accounting for Kazakhstan. Practical application of a typical configuration":

\* agreement on the opening of the Certification Training Center.

After concluding all contracts and fulfilling the conditions, the university receives a Certificate certifying that it is the Certification Training Center at an educational institution. As a rule, then the cabinet is being branded, which means the opening of the Certification Training Center in the university.

This is a specialized auditory that is equipped with modern facilities computers with Internet access and appropriate software – 1C company's information products for universities. Also, one of the important events held by 1C company is the organization and holding of the international professional competition on "1C: Accounting 8" within the framework of the annual student 1C: competitions. As a rule, students prepare for this event on the basis of the Certification Training Center. Students who are winners in this competition receive cash prizes and certificates from 1C company.

The main branch of the economy of Northern Kazakhstan is the agro-industrial complex. Therefore, main attention is paid for training economic specialists for regional agrarian labor market, i.e. business entities that operate in the rural areas. Accounting is implemented in accordance with the current tax legislation of the Republic of Kazakhstan. The «Accounting for Kazakhstan» configuration provides the following features:

- •fixed assets, tangible and intangible assets accounting;
  - bank and cash transactions accounting;
- taxes accounting, in particular, VAT accounting and income tax accounting;
  - performing routine operations.

These features are compatible with the requirements that are applied to the accounting in agriculture. In general, the configuration provides the ability to keep records on behalf of several organizations in a common information base, and also implemented a system of accounting for structural units both allocated and not allocated to a separate balance sheet. For structural divisions, the possibility of reporting and calculating taxes in the context of tax committees has also been implemented.

In general, the functioning of the 1C: Enterprise 8 system is determined by two processes that closely interact with each other:

\* configuration, administration, preservation and restoration of the information base – the process of forming the structure of the information base, setting up algorithms for calculations and processing, using forms of documents and reporting forms that have been developed by correspondent fiscal bodies, taking into account various accounting features:

\* the user's direct work with the accounting information base, which is largely determined by the configuration properties.

Thus, two modes are provided for working with the program:

- configurator for work on configuration and administration of the information base;
- 1C: Enterprise for users to work with the information base.

The introduction of 1C at the university is the start for obtaining domestic certification (professional accountant). At the same time there are some alternatives, for example, such international certifications as CIPA, CPA and DipIFR that can be used by the accountants employed at the agrarian sector of economy.

The CIPA (Certified International Professional Accountant). This examination program is an international certification program for professional accountants. Holders of CIPA certificates receive the right to add the name of the certificate to their signature, which corresponds to international practice. The CIPA examination program consists of three components: training, examination and certification.

A CPA in the United States of America is a license that allows to its owner to provide accounting, tax, and financial services directly to the public. The license confirms professional knowledge and abilities in the field of auditing, taxation, financial accounting and reporting. The license is issued and regulated by the state authorities and allows to its owner to provide services in relevant state.

The DipIFR diploma was designed to enhance knowledge in the field of IFRS, it helps to understand the basic concepts and principles underlying international standards, as well as provides skills for applying IFRS in practice.

The teaching plans for educational programs «Economics» and «Accounting and Audit» provide the following disciplines that are pre-requisites for 1C taking into account the features of accounting in the agrarian sphere of the Republic of Kazakhstan:

1. Fundamentals of accounting. The discipline studies the history of the formation of accounting as a science and information system, accounting functions, balance sheet, accounts, correspondence of accounts, primary supervision that is the basis of the accounting information system and financial reports. The discipline is aimed at mastering the basics of accounting, obtaining skills and techniques of its management in organizations in accordance with current national and international

standards, accounting principles, regulatory documents.

After completing the course, the student will know the role of accounting in the economic management system, its tasks in ensuring the safety and expediency of using all types of resources; have an idea of the role and purpose of the fundamental principles of accounting in modern conditions; is able to fill out primary accounting documents and accounting registers in accordance with IFRS, reflect the facts of economic activities.

2. Financial accounting. The discipline is aimed at acquiring the skills of collecting, registering and processing information that is necessary for financial statements and reports of organizations in accordance with international standards.

After completing the course, the student will be able to use and apply the system of knowledge about accounting principles for the presentation of financial and fiscal statements and read financial statements and reports prepared in accordance with International Financial Report Standards and domestic standards acting in the Republic of Kazakhstan; know generally accepted rules and regulations for the presentation and performance of financial statements and the valuation of assets, liabilities, capital, income and expenses in organizations; international financial reporting standards; systems for the preparation and presentation of financial statements; have the skills of recognition, valuation of assets. liabilities, debts, capital, income and expenses; preparation of financial statements based on accounting data; demonstrate knowledge of the basic concepts, aspects and principles of financial and managerial accounting and competence in the field of accounting policy formation and development, organization of accountting at the enterprise and accounting with the use of modern computer technological facilities. technical equipment and accounting programs.

3. Electronic accounting. The discipline studies the basics of accounting focused on its computer form and mastering work in the accounting program «1C: Enterprise». The discipline is aimed at studying the basics of work in the «1C: Enterprise program», configuration mode, setting up accounting accounts, working with reference books, in-ventory accounting, settlements with counter-parties, banking and cash transactions, as well as accounting for trading operations. Up-on gradua-

tion, the student is able to keep records using computer technology.

After successful completion of the course, the student will know the ways to improve computer accounting, constantly based on the results achieved; get a fairly complete picture of the real technology of accounting with the use of modern computer technology and accounting software; be able to use modern computer terminology; is able to configure programs to automate the unique accounting needs inherent in a particular enterprise; is able to carry out the productive work with data in the graphical environment of fixed assets.

Also, the student will be able to demonstrate knowledge of the basic concepts and principles of financial and managerial accounting and competence in the field of accounting policy formation, organization of accounting at the enterprise and accounting with the use of modern computer technology and accounting programs; use accounting information for the formation of indicators of internal and external accounting statements of the organization, perform tax calculations based on standard methods, taking into account the current regulatory framework of the Republic of Kazakhstan.

4. Accounting in agriculture. The purpose of this study course is to assimilate students' knowledge about the peculiarities of agricultural production and their impact on the organization of accounting, the study of normative legal acts regulating the activities of agriculture in market relations in accordance with international standards.

After completing this course, the student develops a holistic opinion about:

- accounting in agriculture;
- the procedure for organizing the accounting process in agriculture;
- keeping records of settlements with customers and contractors;
- organization of accounting for work in auxiliary production;
- organization of cost accounting for the processing of agricultural products:
  - determination of financial outcomes.

The student will also have the following skills:

- \* to use professional information collection in practice:
- \* to organize the accounting process in agriculture:
  - \* register and process information;

- \* to put into practice the knowledge gained and the ability to understand the processes taking place in agriculture;
- \* organize the accounting of work in the main production;
- \* compare the actual cost of agricultural products with the cost that is planned at the enterprise:
- \* organize accounting for the sale of finished products;
- \* calculate the prime-cost of a unit of production in agriculture and keep records of calculation differences:
- \* determine the calculation differences per unit of output that has been received;
- \* provide the material in an accessible and understandable form for consideration;
- \* to form the financial statements of an agricultural organization in accordance with national and international standards:
  - \* determine the final financial results.
- 5. Tax accounting. The purpose of this course is to acquire theoretical knowledge and practical skills in the reliable formation of taxable objects for accounting periods, determining the amounts of tax payments, and organizing tax accounting in various sectors of the economy. The discipline studies the fundamentals of tax accounting, corporate income tax reporting, accounting for total annual income, deductions from total annual income, deductions for fixed assets (tangible and intangible), determination of taxable turnover, organization of calculations for individual income tax.

As a result of studying the discipline, the student will be able to make tax calculations based on existing methods developed and implemented in tax practice in accordance with the regulatory legal acts of the Republic of Kazakhstan. The student will also be able to use accounting information for generating relevant indicators of internal and external accounting statements and reports of the organization, to calculate taxes and other obligetions in accordance with standard methods, taking into account the current regulatory framework in the Republic of Kazakhstan.

Mastering these accounting disciplines contributes to the formation, development and implementation of skills of the any graduate that are necessary for drawing up the integrated financial and economic management of a modern business entity in accordance with the requirements of the organization of both managerial and technological aspects of industrial and agricultural production and services.

#### **Discussion**

As a whole, The students can demonstrate knowledge and skills in generation of the data on the financial, production and commercial activities of the organization, carry out calculations for materials, labor resources and financial assets that are necessary for the implementation of various activities and build econometric models; calculate the costs of products, expenses of works and services, define the optimal strategy of the enterprise development and make business plans for the production of goods and services.

Thus, the study of the accounting fundamentals, financial accounting and electronic accounting is aimed at the successful acquisition of skills and abilities that contribute to the successful pass of the qualification test with the next obtaining the certificate "1C: Professional". Preparation to the qualification test is based on solving a cross-cutting task by the students. Its consistent implementation includes all the main possible situations that can take place in the professional activity of any accountant employed at the agrarian sector of economy.

In general, during the entire period of Certification Training Center operation 36 people were trained, 24 of them have received certificates "1C: Professional". Among these 24 people, 12 people passed the exam the first time, 8 people from the second time, 3 people did this exam successfully from the third attempt and one person passed the exam from the fourth time.

The final results of the training are certificates that are posted as the achievements of the Certification Training Center.

More than a half of these students have successfully found job in various agricultural companies of the Northern Kazakhstan. The presence of a certificate "1C: Professional" in addition to the diploma of higher education in all cases was a competitive advantage of any university alumni under employment to any agricultural company.

## **Conclusions**

Overall, based on the considered approaches to the certification process of various products, goods and services, we have made following conclusions:

1. Having analyzed the relevant scientific literature that considers the gist of "certification", the modern approaches to the explanation of this term in agriculture and in other economic areas have been carried out. This analysis has been done by the authors with the references to the scientific positions and opinions of the researchers who pub-

lished their outcomes in the high-ranking journals that are indexed in Web of Science / Clarivate Analytics.

- 2. A certified university graduate is considered by the employer as an employee with competitive advantages who meets professional standards in all economic branches. The presence of "1C:PROFESSIONAL" certificate (additionally to the diploma) is the supplementary advantage within the alumni's employment in the agrarian labor market.
- 3. The implementation of hi-tech innovations increases the level of professional skills and economic competencies of any graduate students, improves their capacities in the successful integration to the different levels of the agrarian labor markets in the Northern Kazakhstan.
- 4. Obtaining additional professional skills through informal education through certifycation training centers will effectively implement the principle of 3L conception.

As a whole, the authors believe that presented research content and implementation of the developed recommendations will provide effective certifying approaches ensuring the growth of the quality of life of people who live in the rural areas, and, on the other hand, it will be one of the main professional development drivers of career growth of the graduates in the agrarian labor market.

Author's contribution: Shaikin Dinmukhammed Nurlanovich: setting goals and objectives, methodology development, writing, study coordination, validation of work results; Valieva Maira Muhametgalievna: analysis and data collection, interpretation of study results; Kopylova Oxana Vasilyevna: data collection, statistical analysis, editing and revision of the publication.

Conflict of interests: on behalf of all authors, the corresponding author guarantees that this paper does not contain any conflict of interests.

**Source of financing**: this paper has not been funded by the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan.

#### References

- [1] Wenqi, Duan. Agricultural certification, market access and rural economic growth: Evidence from poverty-stricken counties in China / Duan Wenqi, Jiang Mingming, Qi Jianhong // Economic analysis and policy. 2024.- Vol. 81. P.99-114.
- [2] Francisco, d'Albertas. Agricultural certifyca-tion as a complementary tool for environmental law compliance / d'Albertas Francisco,

Ruggiero Patricia, Fernando Luis, Pinto Guedes, Sparovek Gerd, Metzger Jean Paul // Biological Conservation.— 2023. —Vo. 277. — P.119-135.

- [3] Земляной, К.Г. Метрология, стандартизация и сертификация: учебное пособие / К.Г. Земляной, А.Э. Глызина. Екатеринбург: Уральский Федеральный университет, 2022. 235 с.
- [4] Borrello, M. Agricultural landscape certification as a market-driven tool to reward the provisioning of cultural ecosystem services / M. Borrello, L. Cecchini, R. Vecchio, F. Caracciolo, L. Cembalo, B.Torquati // Ecological Economics. 2022. –Vol. 193. P.51-66.
- [5] Бастаубаева, Ш.О. Методы нефинансового стимулирования органического земледелия / Ш.О Бастаубаева, В.В. Григорук, Н.Д. Слямова // Проблемы агрорынка. 2023. №3.- С.159-168.
- [6] Hideyuki, Kubo. The effect of agricultural certification schemes on biodiversity loss in the tropics / Kubo Hideyuki, Darmawan Arief, André Hendarto, Mader Derek // Biological Conservation. 2021. –Vol. 261. P.128-142.
- [7] Solhee, Kim. Statistical inference method for Korean low-carbon certificate criteria of agricultural products to reflect uncertain conditions / Kim Solhee, Suh Kyo // Journal of Cleaner Production. 2023. –Vol. 398. P. 51-69.
- [8] Айсаутов, Д.М. Офис управление проектами в устранении барьеров в региональной торговле на примере импорта молочных продуктов из Кыргызстана / Д.М. Айсаутов // Проблемы агрорынка.-2022.- №2.- С.202-211.
- [9] Ибыжанова, А.Д. Экспорт продукции аграрного сектора Западно-Казахстанской области: тенденции, целевые ориентиры / А.Д. Ибыжанова, Э.А. Рустенова, А.К. Джакупова // Проблемы агрорынка. 2021. №4.- С.78-87.
- [10] Siaw, D. Rethinking the near collapse of certification programmes in commodity value chains: A temporal myopia perspective / D. Siaw, D. Sarpong, D. Botchie, G. Ofosu // Journal of Rural Studies.— 2023.— Vol.103. -P. 18-39.
- [11] Mills, F. An online RCT on behavioral expectations effects of COVID-19 certification policies in England / F. Mills, H. Carter, L. Benny, M. Barnard, C. Symons // Vaccine: X. 2023.- Vol.15.- P.2-11.
- [12] Zheng, Y. Predicting Foodborne Disease Outbreaks with Food Safety Certifications: Econometric and Machine Learning Analyses / Y. Zheng, A. Gracia, L. Hu // Journal of Food Protection.—2023.- Vol.86.- Issue 9.-P.1-7.
- [13] Концепция развития высшего образования и науки в Республике Казахстан на 2023-2029 годы, утвержденной Постановлением Правительства Республики Казахстан (№248 от 28 марта 2023 года) [Электронный ресурс]. 2023.-URL:https://www.adilet.zan.kz/

rus/docs/P2300000248#z126 (дата обращения: 10.04.2024).

- [14] Официальный сайт on-line платформы COURSERA [Электронный ресурс].— 2024. URL: https://www.coursera.org (дата обращения: 07.04.2024).
- [15] Нурбек С. Министерство науки и высшего образования Республики Казахстан уделяет первостепенное значение модернизации региональных вузов. Официальный информационный ресурс Премьер-Министра Республики Казахстан [Электронный ресурс]. 2023.- URL: https://www.primeminister.kz/ru/news/reviews/mon-rk-udelyaet-pervostepennoe-znachenie-modernizacii-regionalnyh-vuzov-s-nur bek-3192636 (дата обращения: 10.04.2024).

#### References

- [1] Wenqi Duan, Jiang Mingming, Qi Jianhong (2024). Agricultural certification, market access and rural economic growth: Evidence from poverty-stricken counties in China. *Economic Analysis and Policy*, 81, 99-114. Available at: (date of access: 10.04.2024) [in English].
- [2] Francisco d'Albertas, Ruggiero Patricia, Fernando Luis, Pinto Guedes, Sparovek Gerd, Metzger Jean Paul (2023). Agricultural certification as a complementary tool for environmental law compliance. *Biological Conservation*, 277, 119-135. Available at: (date of access: 05.04.2024) [in English].
- [3] Zemljanoj, K.G., Glyzina, A.Je. (2022). Metrologija, standartizacija i sertifikacija: uchebnoe posobie [Metrology, standardization and certification: textbook]. Ekaterinburg: Izdatel'stvo Ural'skogo Federal'nogo universiteta Publishing House of the Ural Federal University, 235 [in Russian].
- [4] Borrello, M., Cecchini, L., Vecchio, R., Caracciolo, F., Cembalo, L., Torquati, B. (2022). Agricultural landscape certification as a market-driven tool to reward the provisioning of cultural ecosystem services. *Ecological Economics*, 193, 51-66 [in English].
- [5] Bastaubaeva, Sh.O., Grigoruk, V.V., Sljamova, N.D. (2023). Metody nefinansovogo stimulirovanija organicheskogo zemledelija [Methods of non-financial stimulation of organic farming]. *Problemy agrorynka Problems of AgriMarket*, 3, 159-168 [in Russian].
- [6] Hideyuki Kubo, Darmawan Arief, André Hendarto, Mader Derek (2021). The effect of agricultural certification schemes on biodiversity loss in the tropics. *Biological Conservation*, 261, 128-142. Available at: (date of access: 5.04.2024) [in English].
- [7] Solhee Kim, Suh Kyo (2023). Statistical inference method for Korean low-carbon certificate criteria of agricultural products to reflect

uncertain conditions. *Journal of Cleaner Production*, 398, 51-69 [in English].

- [8] Ajsautov D.M. (2022). Ofis upravlenie proektami v ustranenii bar'erov v regional'noj torgovle na primere importa molochnyh produktov iz Kyrgyzstana [Project management office in removing barriers in regional trade on the example of dairy products import from Kyrgyzstan]. Problemy agrorynka Problems of AgriMarket, 2, 202-211 [in Russian].
- [9] Ibyzhanova, A.D., Rustenova, Je.A., Dzhakupova, A.K. (2021). Jeksport produkcii agrarnogo sektora Zapadno-Kazahstanskoj oblasti: tendencii, celevye orientiry [Export of products of agricultural sector of the west Kazakhstan region: trends, targets]. *Problemy agrorynka Problems of AgriMarket*, 4, 78-87 [in Russian].
- [10] Siaw, D., Sarpong, D., Botchie, D., Ofosu, G. (2023). Rethinking the near collapse of certification programmes in commodity value chains: A temporal myopia perspective. *Journal of Rural Studies*, 103, 18-39 [in English].
- [11] Mills, F., Carter, H., Benny, L., Barnard, M., Symons, C. (2023). An online RCT on behavioral expectations effects of COVID-19 certification policies in England. *Vaccine: X*, 15, 2-11 [in English].
- [12] Zheng, Y., Gracia, A., Hu, L. (2023). Predicting Foodborne Disease Outbreaks with Food Safety Certifications: Econometric and Machine Learning Analyses. *Journal of Food Protection*, 86(9), 1-7 [in English].
- [13] Koncepcija razvitija vysshego obrazovanija i nauki v Respublike Kazahstan na 2023-2029 gody, utverzhdennoj Postanovleniem Pravitel'stva Respubliki Kazahstan (№248 ot 28 marta 2023 goda) [The concept of development of higher education and science in the Republic of Kazakhstan for 2023-2029, approved by the Decree of the Government of the Republic of Kazakhstan (No. 248 dated March 28, 2023)]. Available at: https://adilet.zan.kz/rus/docs/P2300 000248#z126 (date of access: 10.04.2024) [in Russian].
- [14] Coursera (2024). oficial'nyj sajt online platformy COURSERA. Available at: https://www.coursera.org/ (date of access: 07.04.2024) [in English].
- [15] Nurbek, S. (2023). MNVO RK udeljaet pervostepennoe znachenie modernizacii regionnal'nyh vuzov –Oficial'nyj informacionnyj resurs Prem'er-Ministra Respubliki Kazahstan [The MSHE of RK pays prime attention to the modernization of regional universities S. Nurbek. Official information resource of the Prime Minister of the Republic of Kazakhstan]. Available at: https://primeminister.kz/ru/news/reviews/mon-rk-udelyaet-pervostepennoe-znachenie-modernizacii-regionalnyh-vuzov-s-nurbek-3192636 (date of access: 10.04.2024) [in Russian].

#### Information about authors:

Shaikin Dinmukhammed Nurlanovich - The main author; Candidate of Economic Sciences, Professor; Chief of the Department of Economics and Accounting; M. Kozybayev North Kazakhstan University; 150000 Pushkin str., 86, Petropavlovsk, Kazakhstan; e-mail: shaikindimash@mail.ru; https://doi.org/0000-0001-7611-2787

Valieva Maira Muhametgalievna; Candidate of Economic Sciences, Associate Professor; Professor of the Department of Economics and Accounting; M. Kozybayev North Kazakhstan University; 150000 Pushkin str., 86, Petropavlovsk, Kazakhstan; e-mail: mvalieva1975@mail.ru; https://doi.org/0000-0002-8891-2332

Kopylova Oxana Vasilyevna; Candidate of Economic Sciences; Associate Professor of the Department of Economics and Accounting; M. Kozybayev North Kazakhstan University; 150000 Pushkin str., 86, Petropavlovsk, Kazakhstan; e-mail: oxana.kopylova@mail.ru; https://doi.org/ 0000-0001-9873-0586

## Авторлар туралы ақпарат:

Шайкин Дінмұхаммед Нұрланұлы – **негізгі автор**; экономика ғылымдарының кандидаты, профессор; «Экономика және есеп» кафедрасының меңгерушісі; М. Қозыбаев атындағы Солтүстік Қазақстан университеті; 150000 Пушкин кош., 86, Петропавл қ., Қазақстан; e-mail: shaikindimash@mail.ru; https://doi.org/ 0000-0001-7611-2787

Валиева Майра Мухаметсалиевна; экономика ғылымдарының кандидаты, қауымдастырылған профессор; "Экономика және есеп" кафедрасының профессоры; М. Қозыбаев атындағы Солтүстік Қазақстан университеті; 150000 Пушкин кош., 86, Петропавл қ., Қазақстан; e-mail: mvalieva1975@mail.ru; https://doi.org/0000-0002-8891-2332

Копылова Оксана Васильевна; экономика ғылымдарының кандидаты; "Экономика және есеп" кафедрасының доценті; М. Қозыбаев атындағы Солтүстік Қазақстан университеті; 150000 Пушкин кош., 86, Петропавл қ., Қазақстан; e-mail: oxana.kopylova@mail.ru; https://doi.org/ 0000-0001-9873-0586

# Информация об авторах:

Шайкин Динмухаммед Нурланович — основной автор; кандидат экономических наук, профессор; заведующий кафедрой «Экономика и учет»; Северо-Казахстанский университет им. М. Козыбаева; 150000 ул. Пушкина, 86, г.Петропавловск, Казахстан; e-mail: shaikindimash@mail.ru; https://doi.org/ 0000-0001-7611-2787

Валиева Майра Мухаметалиевна; кандидат экономических наук, ассоциированный профессор; профессор кафедры «Экономика и учет»; Северо-Казахстанский университет им. М. Козыбаева; 150000 ул. Пушкина, 86, г.Петропавловск, Казахстан; e-mail: mvalieva1975@mail.ru; https://doi.org/ 0000-0002-8891-2332

Копылова Оксана Васильевна; кандидат экономических наук; доцент кафедры «Экономика и учет»; Северо-Казахстанский университет им. М. Козыбаева; 150000 ул. Пушкина, 86, г.Петропавловск, Казахстан; e-mail: oxana.kopylova@mail.ru; https://doi.org/ 0000-0001-9873-0586